X-Plain™
Rotator Cuff Injuries
Reference Summary

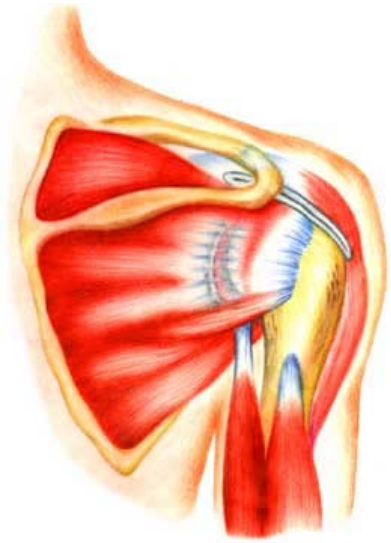
Shoulder injuries are fairly common, especially for people who tend to exercise a lot. Some of the most common shoulder injuries are called "rotator cuff" injuries. This reference summary will help you better understand rotator cuff injuries, how to prevent them, and how they can be treated.

Anatomy

The shoulder joint joins the upper body to the arm. The bones included in the shoulder joint are the following:

- the scapula, or shoulder blade bone
- the humerus, or upper arm bone

The shoulder bones are covered by tissue called cartilage. The smooth surfaces of the cartilage allow for smooth, painless movement in the shoulder joint. Ligaments connect the bones and help to keep the shoulder in place. Shoulder muscles that are attached to the shoulder blade are anchored in the head of the humerus. This allows the shoulder to move in all directions.



The combination of the muscles and ligaments in the shoulder is called the "rotator cuff." The rotator cuff is located under part of the shoulder blade. The "bursa" is a fluid-filled sac that is located between the shoulder joint and the rotator cuff. This prevents the rotator cuff from rubbing against the shoulder.

Symptoms & Causes

The symptoms of rotator cuff injuries include:

- shoulder pain, mostly when moving the shoulder or sleeping on it
- tenderness in the shoulder
- weakness in the shoulder
- not being able to move the shoulder as much as normal

Symptoms of rotator cuff injuries may occur on their own, or they may be noticed after a fall or an injury. Symptoms of rotator cuff injuries can also show up gradually, over a period of time. Strains or tears in the tendons or muscles that form the rotator cuff can be the cause of a rotator cuff injury. Inflammation of the bursa, called bursitis, or inflammation of the tendons, called tendonitis, can also be part of a rotator cuff injury. Sometimes the rotator cuff gets pinched between the shoulder joint and the overly-

ing bone, causing pain and inflammation.

Rotator cuff injuries may occur due to:

- a fall or a specific trauma to the shoulder
- repetitive stress on the shoulder

Athletes and construction workers who use their shoulders a lot often have rotator cuff injuries, due to the physical nature of their activities. Factors that increase the risk of having a rotator cuff injury include:

- old age
- poor posture
- weak shoulder muscles

Diagnosis

The diagnosis of a rotator cuff injury is usually made after a good medical history and a thorough physical examination are performed. Tests such as shoulder x-rays and MRIs may also be needed to diagnose a rotator cuff injury. Sometimes an arthrogram may be needed. For an arthrogram, dye is injected into the shoulder joint and x-rays are taken. The dye helps the shoulder joint to show up better in the x-rays.

Treatment

Most rotator cuff injuries are successfully treated with physical therapy and exercises that can be done at home. The goal of physical therapy is to strengthen the muscles and increase the range of motion of the shoulder. Physical therapy may last anywhere from a few weeks to a few months.

Anti-inflammatory medications, such as ibuprofen, may also be needed. Occasionally, steroid injections in the bursa, shoulder joint, or around the tendons may help reduce inflammation and pain and increase the mobility of the shoulder joint.

If other treatments are not successful, surgery may be recommended to shave off any bone spurs that may be pinching the rotator cuff. Surgery may also be helpful in repairing torn tendons and muscles.

Prevention

As with any other medical condition, it is better to prevent a condition than to try to fix it after it happens. Regular shoulder exercises are very helpful in strengthening the muscles and tendons, as well as preserving the shoulder's range of motion.

Taking frequent breaks at work and resting the shoulder is also very important if you have a job that requires a lot of physical activity. The following are some exercises that can help to improve and prevent rotator cuff injuries.

Wall Slides. Standing up straight in front of a wall, reach your arm out in front of your body so that your fingertips touch the wall. Slowly slide your fingertips up as you walk toward the wall without arching your back. Slowly slide your fingertips back down the wall as you back up away from the wall. This can also be done standing with the wall to your side.

Front Crossover Pulls. With your right hand, grab your left arm above the elbow and gently pull it across the front of your body until you can feel your shoulder stretch. Hold for 10 seconds. Repeat 3-5 times and do the same with the other arm.

Blade Squeeze. Bending your arms at the elbows, with your forearms to the front of your body, push your elbows back to squeeze your shoulder

blades together. Hold for 10 seconds and repeat 3-5 times.

Front Stretch. Bending your left arm at the elbow, grab it with your right hand, just below the elbow. Pull the left arm over your right shoulder and hold for 10 seconds. Do the same with the other arm.

Back Stretch. Bending your left arm at the elbow, grab your left elbow with your right hand. Pull the left arm behind your head and hold for 10 seconds. Do the same with the other arm.

Towel Stretch. Raising your left arm, dangle a towel behind your back. Grab the towel with your right hand, behind your back. Pull tightly on the towel and creep your thumb up as far as you can get it.

Applying a cold pack or a heating pad to the shoulder is a good way to reduce inflammation and pain. Alternating heat and cold sometimes soothes pain also. Warm showers are another way to apply warmth to aching shoulders. Over-the-counter medications can also be helpful in reducing inflammation.

Summary

Rotator cuff injuries are among the most common shoulder injuries. When caught early and treated properly, most patients with rotator cuff injuries do not need surgery. Exercises and lifestyle changes can be very helpful in preventing rotator cuff injuries.